

**I B.Pharmacy I Semester Supplementary Examinations, Aug. 2015**  
**PHARM ORGANIC CHEMISTRY -I**

**Time: 3 hours**

**Max Marks: 75**

**Answer any FIVE Questions**  
**All Questions carry equal marks**

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1. (a) Define inductive effect. Classify with examples. Explain in brief inductive effect.  
(b) Write a short note on Electromeric effect. [8+7]
2. (a) Explain relative stabilities, heat of combustion and hydrogenation.  
(b) What are cycloalkanes? Discuss Bayer's strain theory to explain the stability of cycloalkanes. [8+7]
3. (a) Discuss the addition of water (Hydration) in alkynes with mechanism.  
(b) Define keto-enol tautomerism. Explain with example. [8+7]
4. (a) Define Birch Reduction? Write the Reaction Mechanism involved in it? Add a note on Synthetic Applications of Birch Reduction  
(b) Explain the statement "Benzene though Unsaturated undergoes Electrophilic Substitution Reactions rather than Electrophilic Addition Reactions" [8+7]
5. (a) Write in detail nomenclature of benzene derivatives with suitable examples  
(b) Describe the Molecular Orbital Picture of benzene with heats of hydrogenation [8+7]
6. Write Reaction Mechanism, Kinetics, Energetics, Stereochemistry and various factors influencing  $SN^1$  Mechanism? Add a note on Rearrangement in  $SN^1$  Reactions? [15]
7. Classify different organic reactions with examples. Describe the reaction mechanisms involved in the different organic reactions. [15]
8. (a) Describe the following Methods of Preparation of Alkyl halides with suitable examples  
(i) Finkelstein Method  
(ii) Hunsdiecker Method  
(b) Explain why Alkyl halides undergo Nucleophilic Aliphatic Substitution Reactions? Enlist various Nucleophilic Aliphatic Substitution Reactions of Alkyl halides for preparation of different classes of Organic compounds? [8+7]

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